



WEAR

SEVERE

CONTAMINATION

SEVERE

FLUID CONDITION

NORMAL



Area
G.LOPES CONSTRUCTION INC./Off-Road

Machine Id

E60

Component

Left Final Drive

Fluid

PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)

RECOMMENDATION

We advise that you check for the source of water entry. We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|----------|
| Sample Number | | Client Info | | PCA0123015 | PCA0078028 | --- |
| Sample Date | | Client Info | | 02 Jul 2024 | 28 Sep 2022 | --- |
| Machine Age | hrs | Client Info | | 12277 | 11250 | --- |
| Oil Age | hrs | Client Info | | 12277 | 11250 | --- |
| Filter Age | hrs | Client Info | | 0 | 0 | --- |
| Oil Changed | | Client Info | | N/A | N/A | --- |
| Filter Changed | | Client Info | | N/A | N/A | --- |
| Sample Status | | | | SEVERE | SEVERE | --- |

WEAR

Gear wear is indicated.

| | | | | | | |
|--------------|--------|-------------|------|---------------|--------|-----|
| Iron | ppm | ASTM D5185m | >800 | ▲ 6195 | ▲ 6168 | --- |
| Chromium | ppm | ASTM D5185m | >10 | ▲ 34 | ▲ 30 | --- |
| Nickel | ppm | ASTM D5185m | >5 | 9 | 11 | --- |
| Titanium | ppm | ASTM D5185m | >15 | 23 | 39 | --- |
| Silver | ppm | ASTM D5185m | >2 | <1 | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >75 | ● 341 | ● 624 | --- |
| Lead | ppm | ASTM D5185m | >10 | 1 | 2 | --- |
| Copper | ppm | ASTM D5185m | >75 | 52 | 20 | --- |
| Tin | ppm | ASTM D5185m | >8 | 0 | 0 | --- |
| Vanadium | ppm | ASTM D5185m | | 1 | 1 | --- |
| White Metal | scalar | *Visual | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | --- |

CONTAMINATION

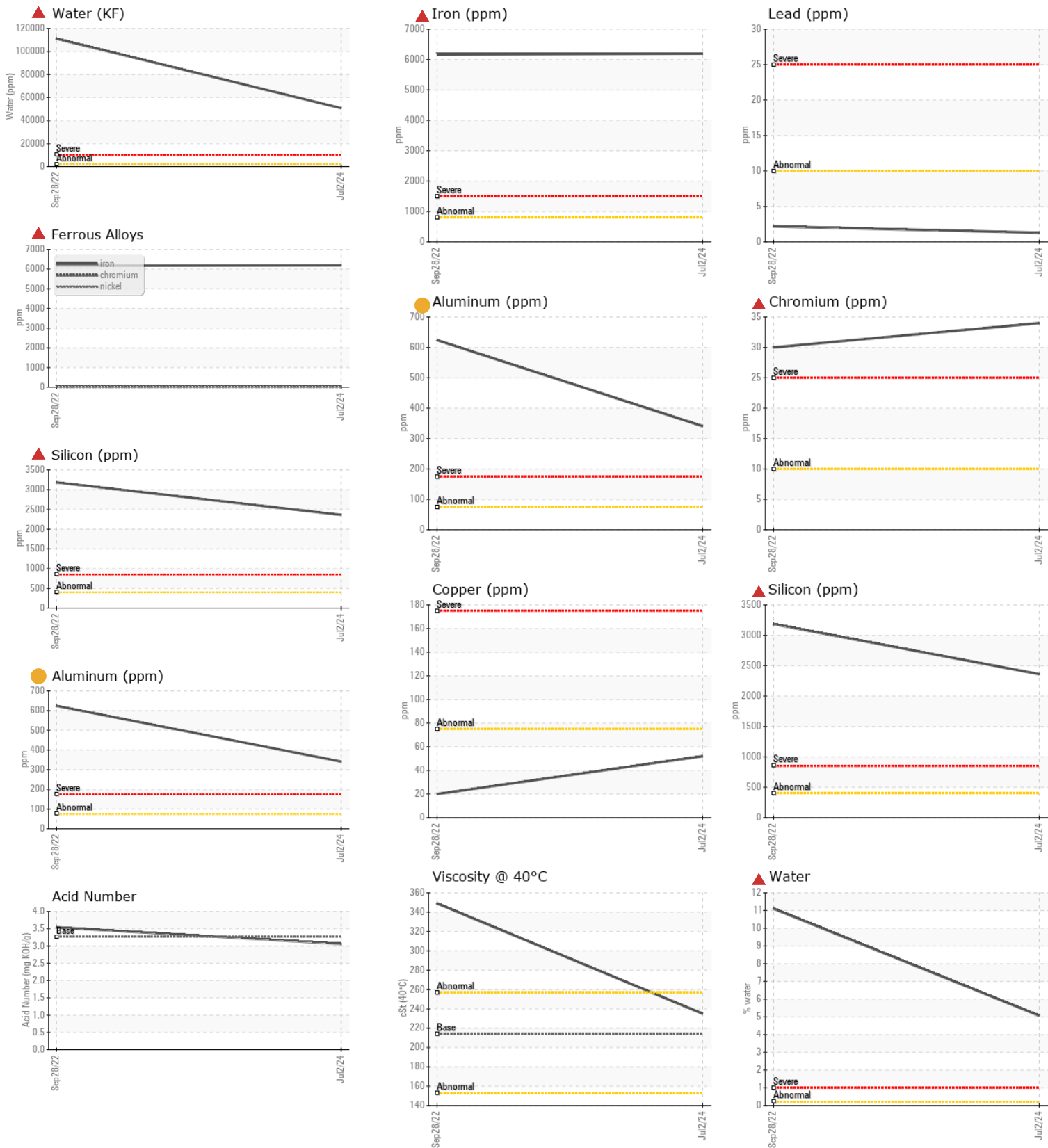
There is a high concentration of water present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

| | | | | | | |
|------------------|--------|-------------|-------|----------------|----------|-----|
| Silicon | ppm | ASTM D5185m | >400 | ▲ 2361 | ▲ 3183 | --- |
| Potassium | ppm | ASTM D5185m | >20 | 143 | 206 | --- |
| Water | % | ASTM D6304 | >0.2 | ▲ 5.07 | ▲ 11.1 | --- |
| ppm Water | ppm | ASTM D6304 | >2000 | ▲ 50700 | ▲ 111000 | --- |
| Silt | scalar | *Visual | NONE | MODER | NONE | --- |
| Debris | scalar | *Visual | NONE | NONE | NONE | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | --- |
| Appearance | scalar | *Visual | NORML | NORML | ● MILKY | --- |
| Odor | scalar | *Visual | NORML | NORML | NORML | --- |
| Emulsified Water | scalar | *Visual | >0.2 | ▲ 0.2% | ▲ 0.2% | --- |

FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

| | | | | | | |
|------------------|----------|-------------|-------|--------------|-------|-----|
| Sodium | ppm | ASTM D5185m | | 106 | 151 | --- |
| Boron | ppm | ASTM D5185m | 2 | 33 | 44 | --- |
| Barium | ppm | ASTM D5185m | 0 | 2 | 12 | --- |
| Molybdenum | ppm | ASTM D5185m | 0 | 8 | 8 | --- |
| Manganese | ppm | ASTM D5185m | 0 | 52 | 48 | --- |
| Magnesium | ppm | ASTM D5185m | 9 | 75 | 100 | --- |
| Calcium | ppm | ASTM D5185m | 3114 | 2814 | 2625 | --- |
| Phosphorus | ppm | ASTM D5185m | 1099 | 1036 | 989 | --- |
| Zinc | ppm | ASTM D5185m | 1245 | 1283 | 1174 | --- |
| Sulfur | ppm | ASTM D5185m | 7086 | 12245 | 13358 | --- |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 3.27 | 3.06 | 3.54 | --- |
| Visc @ 40°C | cSt | ASTM D445 | 213.9 | 235 | 349 | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0123015 **Received** : 08 Jul 2024
Lab Number : 06230318 **Tested** : 09 Jul 2024
Unique Number : 11113811 **Diagnosed** : 10 Jul 2024 - Don Baldrige
Test Package : MOB 2 (Additional Tests: KF)

G LOPES CONSTRUCTION
 565 WINTHROP ST
 TAUNTON, MA
 US 02780
 Contact: BUTCH MCGRATH
 bmcgrath@glopes.com
 T:
 F:

To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)